

## APPENDIX D

### GLOSSARY

**ACTIVITY:** A course of action or treatment that is undertaken to directly or indirectly produce, enhance, or maintain forest and range land outputs or achieve administrative or environmental objectives.

**ACTIVITY AREA:** Area within the project area where activities are proposed.

**ACTIVITY FUELS:** Fuels generated as the result of a timber sale or other vegetation treatments.

**AERIAL FUELS:** All live and dead vegetation located in the forest canopy or above the surface fuels, including tree branches and crowns, snags, moss and high brush.

**AFFECTED ENVIRONMENT:** The biological, physical, and human settings changed by the alternatives.

**AGE CLASS:** - An interval, commonly 10 years, into which the age range of trees or vegetation is divided into for classification. May also refer to general diameter classes and displayed as seedling, sapling, pole, mature etc.

**AGGRADATION (DEPOSITION):** When more sediment enters a reach than leaves it, there is a buildup of sediment. This is called aggradation or deposition.

**AIR QUALITY:** Refers to standards for various classes of land as designated by the Clean Air Act, P.L. 88-206: Jan. 1978.

**AIRBORNE PARTICULATE:** Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Particulates include: windblown dust, emissions from industrial processes, smoke from the burning of wood and coal, and the exhaust of motor vehicles.

**AIRSHED:** Geographical areas identified by the Montana/Idaho Airshed Group with similar topography and weather patterns.

**ALL TERRAIN VEHICLE (ATV):** A type of off-highway vehicle that travels on three or more low-pressure tires; has handle-bar steering; is less than or equal to 50 inches in width; and has a seat designed to be straddled by the operator.

**ALTERNATIVE:** Management options for responding to the purpose and need for action and/or issues.

**ANALYSIS AREA:** The geographic area defining the scope of analysis for a particular resource. This area may be larger than the project area when effects have the potential to extend beyond the boundaries of the proposed action.

**APPEAL:** A request by any party dissatisfied with a decision of a Forest Officer to have that decision reviewed at a higher organizational level within the Forest Service and, where appropriate, by the Secretary of Agriculture.

**APPROPRIATED FUNDS:** Monies allotted or budgeted for departments to fund the job activities taking place for the fiscal year.

**AQUATIC SYSTEMS:** Biological and physical attributes and their interaction related to water.

**ASPECT:** - The direction towards which a slope faces, expressed in cardinal directions such as north, east, south, west.

**AVAILABLE FUEL:** The portion of the total fuel that actually burns.

**BACKING FIRE:** A slowly advancing fire that is burning into or against the wind or downslope. See

head fire.

**BASAL AREA:** The area of the cross-section of a tree stem measured at 4.5 ft. above the ground. Basal area can be used to measure how much of a site is occupied by trees. Stand basal area can be described by the total basal area per unit area.

**BENEFICIAL USES:** Attributes that are considered useful products of the resource. They may include (but are not limited to): recreation, production of salmonid fishes, drinking water, power generation, and irrigation.

**BEST MANAGEMENT PRACTICES (BMP):** A set of practices which, when applied during implementation of a project, ensures that water-related beneficial uses are protected and that State water quality standards are met.

**BIG GAME:** Those species of large mammals normally managed as a sport hunting resource.

**BIODIVERSITY:** Biodiversity is the variety of life in an area, including all the processes of life. Included in this definition is genetic diversity in species; species richness; variety, patterns, and abundance of species communities and ecosystems at large geographical scales; and the processes whereby species interact.

**BIOLOGICAL ASSESSMENT:** Information (document) prepared by or under the direction of the federal agency concerning listed and proposed threatened and endangered species and proposed critical habitat that may be present in the action area and the evaluation of potential effects of the action on such species and habitats.

**BIOLOGICAL EVALUATION:** A documented Forest Service review of programs or activities in sufficient detail to determine how an action or proposed action may affect any sensitive species.

**BIOMASS:** The sum total of living plants and animals above and below ground.

**BLOWDOWN:** Trees that have been uprooted by the force of wind.

**BOARD FOOT (BF):** A unit of measurement equal to an unfinished board one square foot by one inch thick. Timber volumes are often expressed in terms of thousands of board feet (MBF) or millions of board feet (MMBF).

**BOGS:** Perennially saturated areas that usually have wetland and riparian plants surrounding them.

**BOLE:** The trunk or main stem of the above ground part of a tree.

**BROADCAST BURN:** Intentional burning within well-defined boundaries for reduction of fuel hazard, as a resource management treatment, or both. Also see Prescribed Burning.

**BULK DENSITY:** The mass of dry soil per unit volume, corrected for weight and volume of coarse fragments greater than 2mm in diameter.

**BURN INTENSITY:** See Fire Intensity.

**BURN SEVERITY:** See Fire Severity; Vegetation Impacts.

**BURNING PERIOD:** That part of each 24-hour period when fires will spread most rapidly. Most commonly 10:00 am to 4:00 pm.

**CANDIDATE SPECIES:** Species identified by the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS), which are considered to be candidates for listing under the Endangered Species Act.

**CANOPY:** The more or less contiguous cover of branches and foliage formed collectively by the crowns of adjacent trees. Layers of the canopy may be distinguished with each layer representing one story. For example, vegetation may be called single storied, two storied or multi storied.

**CANOPY CLOSURE:** The progressive reduction of space between tree crowns as they spread laterally;

a measure of the percent of potential open space occupied by the collective tree crowns in a stand.

**CANOPY FUELS:** The live and dead foliage, live and dead branches, and lichen of trees and tall shrubs that lie above the surface fuels.

**CAVITY:** Hollows, which are excavated in trees by birds, used for roosting and reproduction by many birds and mammals.

**CAVITY HABITAT:** Standing dead trees, broken-topped live trees, and down logs used by wildlife species that excavate and/or occupy cavities in these trees.

**CHAIN:** A non-metric measure of distance common to land surveying, forestry and fire management. One chain equals 66 feet.

**CLEARCUT HARVEST:** Removal of the entire stand in one cutting with reproduction obtained either by planting or natural seeding from adjacent stands.

**CLOSED CANOPY:** The condition that exists when the canopy created by trees or shrubs or both is dense enough to exclude most of the direct sunlight from the forest floor.

**CLOSED ROAD:** A national forest road or segment which is restricted from certain types of use during certain seasons of the year. The prohibited use and the time period of closure must be specified. The closure is legal when the Forest Supervisor has issued an order and posted it in accordance with Chapter 36 of the CFR section 261.

**COARSE WOODY DEBRIS:** Sound and rotting dead woody plant material, standing or fallen, generally greater than 3 inches in diameter. It provides habitat for wildlife and plants and is a source of nutrients and structures for soil protection and development.

**CODE OF FEDERAL REGULATIONS (CFR):** The official, legal tabulation, or regulations directing federal government activities.

**COMMUNITY:** A group of one or more populations of plants and animals in a common spatial arrangement; an ecological term used in a broad sense to include groups of various sizes and degrees of integration.

**COMPACTION:** A physical change in soil properties from compression, vibration, or shearing that increases soil bulk density and decreases porosity, air exchange, root penetration, infiltration, and permeability.

**CONTAIN A FIRE:** To take suppression action, as needed, which can be reasonably be expected to check the fire's spread under prevailing conditions. (Obsolete terminology)

**CONTROLLED BURNING:** See Prescribed Burning.

**CONTROL LINE (Fire Line):** An inclusive term for all constructed or natural fire barriers and treated fire edge used to control a fire.

**CONIFER:** Any of a group of needle and cone-bearing evergreen trees, typically referring to gymnosperms.

**CONVECTION COLUMN:** The thermally produced, ascending column of gases, smoke, and debris produced by a fire.

**CORRIDORS:** An area through which species can move from one place to another over time in response to changes in environment or as a natural part of their life history.

**COST:** The negative or adverse effects or expenditures resulting from an action. Costs may be monetary, social, physical, or environmental in nature.

**COUNCIL OF ENVIRONMENTAL QUALITY (CEQ):** An advisory council to the President established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

**COVER:** Vegetation used by wildlife for protection from predators, breeding, and rearing of young (hiding cover), or to ameliorate conditions of weather (thermal cover).

**CROWN FIRE:** A fire that advances from the top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either dependent or independent, to distinguish the degree of independence from the surface fire's influence. See crown out.

**CULTURAL RESOURCES:** The physical remains of human activity (e.g., artifacts, ruins, burial mounds, petroglyphs, etc.) having scientific, prehistoric, or social values.

**CUMULATIVE EFFECT:** The impact on the environment which results from the incremental impact of past, present, and reasonably foreseeable actions. Cumulative impacts can also result from individually minor but collectively significant actions over a period of time.

**DECADENT:** Deteriorating; when used in reference to the conditions of groups of trees, there are inferences of the loss of trees from the overstory and of the presence of disease, or indications of loss of vigor in dominant trees.

**DECIDING OFFICER:** The Forest Service employee who has the authority to select and/or carry out a specific planning action. May also be referred to as the "Responsible Official".

**DECOMMISSION:** To remove those elements of a road or buildings that reroute hillslope drainage and present slope stability hazards – *synonym* hydrologic obliteration.

**DEGRADATION:** This occurs when a stream has excess energy and more sediment leaves a reach than enters it. This is associated with channel scouring.

**DENNING SITE:** A place of shelter for an animal; also where an animal gives birth and raises young.

**DETRIMENTAL SOIL DISTURBANCE:** The effects of compaction, displacement, rutting, severe burning, surface erosion, loss of surface organic matter, and soil mass movement. At least 85 percent of an activity area must have soil that is in satisfactory condition. Detrimental conditions include:

**Compaction:** Detrimental compaction is a 15 percent increase in natural bulk density. The cumulative effects of multiple site entries on compaction should also be considered since compacted soils often recover slowly.

**Rutting:** Wheel ruts at least 2 inches deep in wet soils are detrimental.

**Displacement:** Detrimental displacement is the removal of 1 or more inches (depth) of any surface soil horizon, usually the A horizon, from a continuous area greater than 100 square feet.

**Severely-burned Soil:** Physical and biological changes to soil resulting from high intensity burns of long duration are detrimental. This standard is used when evaluating prescribed fire. Guidelines for assessing burn intensity are contained in the Burned-Area Emergency Rehabilitation Handbook (FSH 2509.13).

**Surface Erosion:** Rills, gullies, pedestals, and soil deposition are all indicators of detrimental surface erosion. Minimum amounts of ground cover necessary to keep soil loss to within tolerable limits (generally less than 1 to 2 tons per acres per year should be established locally depending on site characteristics).

**Soil Mass Movement:** Any soil mass movement caused by management activities is detrimental. (R1 SUPPLEMENT 2500-2014-1 2550).

**DESIGNATED ROADS AND TRAILS:** Specific roads and trails identified by the agencies where some type of motorized vehicle use is appropriate and allowed either yearlong or seasonally.

**DESIRED NON-NATIVE SPECIES:** Species of plants or animals that are not native to an area but provide important social or economic benefits.

**DESIRED FUTURE CONDITION:** A description of the project area or resource conditions that result from application of Forest Plan goals, objectives, and standards. The relative difference between

current and desired conditions is a basis to compare alternative management actions or strategies.

**DEVELOPED RECREATION:** Recreation that occurs where improvements enhance recreation opportunities and accommodate intensive recreation activities in a defined area.

**DEVELOPED RECREATION SITES:** Relatively small, distinctly defined areas where facilities are provided for concentrated public use (i.e., campgrounds, picnic areas, and swimming areas).

**DIRECT EFFECTS:** Effects on the environment which occur at the same time and place as the initial cause or action.

**DISPERSED RECREATION:** Outdoor recreation in which visitors are diffused over relatively large areas. Where facilities or developments are provided, they are more for access and protection of the environment than for the comfort and convenience of the people.

**DISPLACEMENT (Soil Displacement):** The removal and horizontal movement of soil from one place to another, usually by mechanical forces such as dozer blades, repeated vehicular traffic, or the yarding of logs.

**DISTURBANCE:** Any event which affects the structure, function, composition, and/or successional development of a plant community (e.g., fire, insect attack, windthrow, timber harvest).

**DIURNAL:** Daily, especially pertaining to cyclic actions which are completed within 24 hours, and which recur every 24 hours, such as temperature, relative humidity and wind.

**DIVERSITY:** The relative distribution and variety of plant and animal communities and species within an area.

**DOWN WOODY MATERIAL:** A component of forest habitats used by wildlife for feeding, denning, and shelter.

**DUFF:** The partially decomposed organic material of the forest floor beneath the litter or freshly fallen twigs, needles and leaves. See litter.

**ECOBURN:** A prescribed fire for which at least one objective is to restore or enhance the condition of an area by approximating the results of a fire burning under conditions of the natural fire regime.

**ECOSYSTEM:** A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

**ECOSYSTEM MANAGEMENT:** Scientifically based land and resource management that integrated ecological capabilities with social values and economic relationships, to produce, restore, or sustain ecosystem integrity, values, and services over the long term.

**EFFECTIVE GROUND COVER:** Effective ground cover consists of vegetation, fine organic matter, coarse woody material, and rock fragments larger than three-fourths inch in diameter in contact with the soil surface.

**EFFECTIVE WIND SPEED:** The mid-flame wind speed adjusted for the upslope effect on fire spread.

**EFFECTS:** Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable, or cumulative.

**ELK HABITAT EFFECTIVENESS (EHE):** An index of the capability of an area to provide protection for elk. It is based on the density of roads open to public motorized use per square mile.

**ELK SECURITY AREA:** A contiguous block of cover over 250 acres in size and at least 1/2 mile from an open road.

**ENDANGERED SPECIES:** Any plant or animal species which is in danger of extinction throughout all or

a significant portion of its range (Endangered Species Act of 1973).

**ENDEMIC:** Native or characteristic of a particular geographic area.

**ENVIRONMENTAL ANALYSIS:** An analysis of proposals and their predictable environmental effects, including physical, biological, economic, and social consequences and their interactions; short and long-term effects; and direct, indirect, and cumulative effects.

**ENVIRONMENTAL ASSESSMENT (EA):** A concise public document which serves to: (a) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a Finding of No Significant Impact; (b) aid in agency's compliance with the National Environmental Policy Act when no environmental impact statement is necessary; and (c) facilitate preparation of an environmental impact statement when necessary.

**ENVIRONMENTAL IMPACT STATEMENT (EIS):** A detailed statement prepared by the responsible official in whom a major federal action which significantly affects the quality of the human environment is described, alternatives to the proposed action provided, and effects analyzed.

**EPHEMERAL STREAMS:** Streams that flow only as a direct response to rainfall or snowmelt events. They have no baseflow.

**EPIDEMIC:** The populations of plants, animals, and diseases that buildup, often rapidly, to highly abnormal and generally injurious levels and affect a large number of the host population throughout an area at the same time.

**EROSION:** Detachment or movement of soil or rock fragments by water, wind, ice, or gravity. Accelerated erosion is much more rapid than normal, natural, or geologic erosion, primarily as a result of the influence of activities of people, animals, or natural catastrophes.

**EXTREME FIRE BEHAVIOR:** Implies a level of wildfire behavior characteristics that ordinarily precludes methods of direct attack. One or more of the following is usually involved: High rates of spread; prolific spotting and or crowning; presence of fire whirls; a strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment, behaving erratically and sometimes dangerously.

**FILL SLOPE:** Road construction slopes that are made by depositing soil from excavated areas.

**FINE FUELS:** Fuels such as grass, needles, fern, tree moss, some slash types & leaves which ignite readily and are consumed rapidly when dry. Also called flash fuels.

**FINE ORGANIC MATTER:** Organic materials such as plant litter, duff, and woody material less than 3 inches in diameter in contact with the soil.

**FIRE BEHAVIOR:** The manner in which a fire reacts to the influences of fuel, weather, and topography.

**FIRE INTENSITY:** The rate of heat release for an entire fire at a specific point in time.

**FIREBRAND:** Any source of heat, natural or manmade, capable of igniting wildland fuels. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels.

**FIRE CYCLE:** (Also called Fire Return Interval) The average time between fires in a given area.

**FIRE-DEPENDENT:** Forests, grasslands, and other ecosystems historically composed of species that evolved with and are maintained by periodic fire.

**FIRE GROUP:** Coniferous vegetation with a similar fire response, fire behavior, and plant response.

**FIRE HAZARD:** The rapid ignition of fuels dependent on arrangement, volume, and conditions to sustain fire.

**FIRE INTENSITY:** The rate of heat release for an entire fire at a specific point in time. See fireline

intensity.

**FIRE LINE:** The part of a control line that is scraped or dug to mineral soil. Sometimes referred to as a fire trail. See control line.

**FIRELINE INTENSITY:** The rate of heat energy released during combustion per unit length of fire front. It is usually expressed in BTUs/second/foot.

**FIRE MANAGEMENT PLAN:** A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans. (NWCG terminology adopted 06/12/97)

**FIRE REGIME:** The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, seasonality, and extent in an ecosystem. Examples include: nonlethal, lethal (stand-replacing), and mixed lethal.

**FIRE REGIME CONDITION CLASS:** Departure from natural vegetation and disturbance regimes.

**FIRE RISK:** The chance that a fire will ignite as affected by the nature and incidence of causative agents (also see Fire Hazard).

**FIRE SEASON:** The period or periods of the year during which wildland fires are likely to occur, spread and do sufficient damage to warrant organized fire suppression activities.

**FIRE SEVERITY: Soil impacts** (BAER Handbook, FSH 2509.13):

**High Severity** – More than 40% of the polygon exhibits soil features likely to significantly increase runoff and erosion (e.g., absence of duff layer, hydrophobic soils, and soil discoloration). High severity fires are lethal to conifers with all needles burned off of the trees.

**Moderate Severity** – Less than 40% of the polygon exhibits high severity indicators. Duff layers may be absent or mostly absent. Moderate severity fire kill the majority of conifers and needles on trees are scorched (brown).

**Low Severity** – Duff layers are burned but intact. Unburned areas are intermingled with lightly burned areas. Low severity fires cause some tree mortality (torching) but stands have a notable live tree component.

**Low Severity** – green islands with spotty underburn. May find fire damage on only small dense pockets of regeneration within understory. Overstory basically has minor to no bole char and minor to no crown scorch.

**FIRE SEVERITY: Vegetation impacts:** For this project, the following vegetation severity definitions were used:

**High Severity** – total bole charring and no needles remain on trees

**Medium Severity** – heavy bole char, greater than 10 feet in height and on all sides of the tree. Crown scorch damage (or radiant heat damage) of 70% or greater of the crown with a minimum of 30% live crown remaining. Medium severity effects can be found as a thin strip between the high severity areas and moderately low to low severity areas as well as in larger size pockets.

**Moderately Low** – light underburn throughout with some crown scorching (scorch on less than 10 to 30% of the crown), small amount of bole char less than 4 feet in height and char could be around entire tree or only partially circle the tree bole.

**Low Severity** – green islands with spotty underburn. May find fire damage on only small dense pockets of regeneration within understory. Overstory basically has minor to no bole

char and minor to no crown scorch.

**FIRE-TOLERANT:** A plant which has properties or characteristics which enable it to survive fire.

**FIRE USE:** The combination of wildland fire use and prescribed application of fire to meet resource objectives.

**FISH HABITAT:** The place where a population of fish species lives and its surroundings; provides life requirements such as food and cover.

**FISHERY:** The total population of fish in a stream or body of water and the physical, chemical, and biological factors affecting that population.

**FLAME LENGTH:** The distance measured from the tip of the flame to the middle of the flaming zone at the base of the fire. It is measured on a slant when the flames are tilted due to the effects of wind and/or slope.

**FLOODPLAIN:** The lowland and relatively flat areas adjoining inland and coastal waters, including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

**FOREST COVER TYPE:** A descriptive classification of actual or potential forest or forest land defined by its vegetative composition and/or locality factors.

**FOREST PLAN:** Refers to the various Forest Plans for each national forest, or specifically to the Bitterroot National Forest Plan.

**FOREST HEALTH:** The condition in which forest ecosystems sustain their complexity, diversity, resiliency, and productivity while providing for human needs and values. It is a useful way to communicate about the current condition of the forest, especially with regard to resiliency, a part of forest health that describes the ability of the ecosystem to respond to disturbances. Forest health and resiliency can be described, in part, by species composition, density, and structure.

**FRAGMENTATION:** The process of removing links between areas of habitat suitable for a species, or the reduction of contiguous blocks of vegetation with similar structure and form into smaller isolated parts.

**FUEL BED:** An array of fuels usually constructed with specific loading, depth, and particle size to meet experimental requirements; also, commonly used to describe the fuel composition in natural settings.

**FUEL LOAD:** The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area, usually expressed in tons per acre.

**FUEL MOISTURE (FMC):** The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212F.

**FUEL REDUCTION:** Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

**FUEL TYPE:** An identifiable association of fuel elements of a distinctive plant species, form, size, arrangement, or other characteristics that will cause a predictable rate of fire spread or difficulty of control under specified weather conditions. Also referred to as fuel model.

**FUELS MANAGEMENT:** Manipulation or reduction of fuels to meet Forest protection and management objectives while preserving and enhancing environmental quality.

**FUELS TREATMENT:** The rearrangement or disposal of fuels to reduce the fire hazard.

**GROUND FIRE:** Fire that consumes the organic material beneath the surface litter.

**GROUND FUELS:** All combustible fuels lying beneath the ground surface including deep duff, roots, rotten buried logs, peat and other woody debris.

**HABITAT:** A place that provides seasonal or year round food, water, shelter, and other environmental



conditions for an organism, community, or populations of plants or animals.

**HABITAT COMPONENT:** A simple part or a relatively complex entity regarded as a part, or an area or type of environment in which an organism or biological population normally lives or occurs.

**HABITAT DIVERSITY:** The variation in types, sizes, and shapes of landscape elements or vegetation types.

**HABITAT EFFECTIVENESS:** The ability of an area to support a species (individual or population) based on a potential of 100%.

**HABITAT TYPE:** The land area capable of supporting a single plant association. Provides a way to classify land area.

**HABITAT TYPE GROUP:** A grouping of habitat types based on similarities in natural disturbance regimes, successional patterns and structural characteristics of mature stands.

**HANDPILE and BURN:** Fuels treatment method used to reduce hazardous fuels concentrations. Material is piled by hand. Piles are burned under conditions when the risk of fire spread is minimal.

**HAZARD:** A fuel complex defined by kind, arrangement, volume, condition, and location that form a special threat of ignition or suppression difficulty.

**HAZARD QUOTIENT:** An estimate of herbicide exposure based on the ratio of the amount of received from a particular exposure scenario to the estimated dose.

**HIDING COVER:** Vegetation capable of hiding 90% of a standing adult deer or elk at 200 feet or less. Includes some shrub stands and all forested stand conditions with adequate tree stem density or shrub layer to hide animals. In some cases, topographic features also can provide hiding cover.

**HYDROLOGIC FUNCTION:** Soil hydrologic function is the ability of the soil to absorb, store, and transmit water, both vertically and horizontally. Changes in soil bulk density, soil structure, and ground cover can alter the hydrologic function of the soil.

**HYDROLOGIC UNIT CODE (HUC):** The United States is divided and sub-divided into successively smaller hydrologic units which are classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

**IMPROVEMENT CUT:** Removing trees of undesirable species, form, or condition from the main canopy in stands past the sapling stage to improve the composition and quality of the remaining stand.

**INDIRECT EFFECTS:** Secondary effects which occur in locations other than where the initial action occurs or significantly later in time.

**INFISH (Inland Native Fish Strategy):** On July 31, 1995, the Decision Notice for Inland Native Fish Strategy Environmental Assessment (INFISH) was signed. This strategy was developed to provide interim direction to protect habitat and populations of native resident fish until longer-term conservation strategies such as the Upper Columbia River Basin and federal recovery plans replaced it.

**INITIAL ATTACK:** An aggressive suppression action consistent with firefighter and public safety and values to be protected.

**INTERDISCIPLINARY TEAM (ID Team):** A group of resource professionals with different expertise that collaborate to develop and evaluate resource management proposals. The team is assembled out of recognition that no one scientific discipline is sufficiently broad to adequately address resource management activities.

**INTERMEDIATE TREATMENT:** Any treatment or tending designed to enhance growth, quality, vigor, and composition of the stand after establishment or regeneration and prior to final harvest. Thinning, salvage, and improvement cuts are all types of intermediate treatments.

**INTERMITTENT STREAM:** A stream which flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow. An intermittent stream shows clear evidence of annual scour. Gullies that washed out during flood events are not considered intermittent streams.

**INVENTORIED ROADLESS AREA:** Undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the Forest Service's Roadless Area Review and Evaluation (RAREII) process, subsequent assessments, or Forest planning.

**IRREVERSIBLE:** A term that describes the loss of future options. Applies primarily to the effects of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity that are renewable only over long periods of time.

**IRRETRIEVABLE:** A term that applies to the loss of production, harvest, or use of natural resources. For example, some or all of the timber production from an area is lost irretrievably while an area is serving as a winter sports site. The lost production is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume timber production.

**ISSUE INDICATORS:** Units of measure developed to facilitate comparison of major issues.

**JACKPOT BURNING:** A fuel reduction/site preparation treatment in which a continuous fuel bed is not present. Jackpot burning is conducted when fuels tend to be scattered with isolated accumulations distributed across the treatment unit.

**LADDER FUELS:** Fuels that can carry a fire from the surface layer into the aerial fuel layer. This may include dense seedling/sapling size trees, dense tall brush and shrubs, heavy concentrations of coarse wood debris.

**LANDSLIDE PRONE AREAS:** Areas which have a tendency toward instability (e.g., very steep slopes on erosive soils, old landslides, and areas with springs).

**LANDTYPE:** A unit of land with similar designated soil, vegetation, geology, topography, climate, and drainage. The basis for mapping units in the land systems inventory.

**LARGE WOODY DEBRIS (LWD):** Branches and/or tree trunks located within a stream channel, originating from trees growing in or near the channel. Such material is considered "large" if it is of sufficient size that it remains at least partially submerged during all but major flood events. These materials are important in stream systems because they serve a variety of functions related to channel hydraulics and morphology. In mountain streams, LWD is very important because it provides excellent hiding cover and forms pools, which are the best fish habitats. Functions would include flow energy reduction due to friction and turbulence on downstream side of debris, and sediment storage on upstream side of materials. LWD is delivered to stream channels by decay and/or windfall of trees in close proximity.

**LETHAL FIRES:** A descriptor of fire response and effect in forested ecosystems of high-severity or severe fire that burns through the overstory and understory which consumes large woody surface fuels and may consume entire duff layer.

**LITTER:** The uppermost layer of loose debris composed of freshly fallen or slightly decomposed organic materials such as dead sticks, branches, twigs, and leaves or needles.

**MANAGEMENT AREA:** Geographic areas, not necessarily contiguous, which have common management direction, consistent with the Forest Plan allocations.

**MANAGEMENT INDICATOR SPECIES (MIS):** A fish or wildlife species selected for monitoring because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality.

**MANAGEMENT IGNITED FIRE:** See Prescribed Burning. (Obsolete terminology)

**MASS EROSION (MASS WASTING):** Downslope movement of a unit of soil. Mass erosion includes landslides, debris flows, debris avalanches, debris torrents, slumps, and soil creeping.

**MATURE:** In forested vegetation, individual trees or stands of trees that in general are at their maximum rate in terms of physiological processes expressed as height, diameter, and volume growth. In the context of wildlife, refers to mature forest habitat with characteristics needed to provide habitat for species such as pine marten and pileated woodpecker (generally occurs around age 100).

**MITIGATION:** Actions to avoid, minimize, reduce, eliminate, replace, or rectify the impact of a management practice.

**MIXED SEVERITY:** Units that have a combination of high, moderate, and low degrees of severity and may depend on fuel loading and placement.

**MONITORING AND EVALUATION:** The evaluation of Forest Plan management practices to determine how well objectives are being met, as well as the effects of those management practices on the land and environment.

**MOTOR VEHICLE:** Any vehicle which is self-propelled, other than:

- (1) a vehicle operated on rails; and
- (2) any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

**NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS):** A legal limit on the level of atmospheric contamination. The level is established as the concentration limits needed to protect all of the public against adverse effects on public health and welfare, with an adequate safety margin. Primary standards are those related to health effects. Secondary standards are designed to protect the public welfare from effects such as visibility reduction, soiling, material damage, and nuisances.

**NATIONAL ENVIRONMENTAL POLICY ACT:** A United States environmental law that established a U.S. national policy promoting the enhancement of the environment and also established the President's Council on Environmental Quality (CEQ).

**NATIONAL FOREST MANAGEMENT ACT (NFMA):** A law passed in 1976 as amendments to the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest Plans and the preparation of regulations to guide that development.

**NATIVE SPECIES:** Those plant and animal species indigenous to the planning or assessment area.

**NEW ROAD CONSTRUCTION:** Activity that results in the addition of Forest classified or temporary road miles.

**NONCOMMERCIAL THINNING:** A thinning done purely as an investment in the future growth of a stand. Tree thinned are small in size and usually have no value. Material thinned may be left in place, piled and piles burned, or extracted based on management objectives. Noncommercial thinning could also include release thinning, weeding thinning, improvement cuttings and pruning.

**NON-LETHAL FIRES:** A descriptor of fire response and effect in forested ecosystems of low severity or cool fire. Has minimal impact on the site. It burns in surface fuels consuming only the litter, herbaceous fuels, foliage, and small twigs on woody undergrowth. Little heat travels downward

through the duff.

**NONSTOCKED:** A stand of trees or aggregation of stands that have a stocking level below the minimum specified for meeting the prescribed management objectives.

**NOXIOUS WEEDS:** Rapidly spreading plants which can cause a variety of major ecological impacts to both agricultural and wild lands. A plant species designated as possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States. According to the Federal Noxious Weed Act (PL 93-639) a noxious weed is one that causes disease or has other adverse effects on people or their environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health.

**OFF-HIGHWAY VEHICLE:** Any motorized wheeled vehicle designed for cross-country travel over any type of terrain.

**FOREST SERVICE OFF-ROAD VEHICLE DESIGNATIONS:**

**Open:** Areas and trails on which all types of motorized vehicles may be operated off roads without restrictions.

**Restricted:** Areas and trails on which motorized vehicle use is restricted by times or specified in orders issued under the authority of 36 CFR 261 or by law.

**Closed:** Areas and trails on which all motorized vehicle use is prohibited, except by permit, under authority of 36 CFR 361 or by law.

**OLD-GROWTH HABITAT:** Old-growth is a distinct successional stage in the development of a forest stand that has special significance for wildlife, generally characterized by:

large diameter trees (often exceeding 19" dbh) with a relatively dense, often multilayered canopy; the presence of large, standing dead or dying trees; down and dead trees; stand decadence associated with the presence of various fungi and heartrots; an average age often in excess of 200 years.

**OPEN ROAD DENSITY:** A measure of the amount of open roads per area of land, usually expressed as miles per square mile.

**OVERSTOCKED:** Stands that exceed a prescribed standard based on the capability of the site and/or other values.

**OVERSTORY:** The portion of trees in a forest which forms the uppermost layer of foliage.

**PARTICULATE MATTER (PM):** Any liquid or solid particles. "Total suspended particulates" as used in air quality are those particles suspended in or falling through the atmosphere. They generally range in size from 0.1 to 100 microns.

**PATCH:** An area of vegetation that is relatively homogeneous internally with respect to composition and successional stage and that differs from what surrounds it.

**PEAK FLOW:** The greatest flow attained during the melting of the winter snowpack.

**PERENNIAL STREAMS:** Streams that flow continuously throughout the year.

**POLES:** A size category for forested vegetation in which trees are usually between 5 inches in diameter up to 9 inches in diameter.

**POTENTIAL HABITAT:** Wildlife habitat that does not currently provide habitat for a particular wildlife species but has the potential to develop into suitable habitat.

**PRESCRIBED BURNING OR PRESCRIBED FIRE:** Controlled application of fire to wildland fuels in either

their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and spread required to attain planned and approved resource management objectives. Also called controlled burning or formerly referred to as management ignited prescribed fire. A written, approved prescribed fire plan must exist and, requirements of the National Environmental Policy Act must be met, prior to ignition. (NWCG terminology adopted 06/12/97)

**PRESCRIBED NATURAL FIRE (PNF):** A naturally occurring fire which is managed under prescribed conditions and allowed to "run its' course" without endangering public safety or significant resource losses. (Obsolete terminology)

**PRESCRIPTION - Fire:** Measurable criteria that guide selection of appropriate management response and actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social or legal considerations. (NWCG terminology adopted 06/12/97)

**PRESCRIPTION - Vegetation:** See Silviculture Prescription definition.

**PREVENTION OF SIGNIFICANT DETERIORATION (PSD):** A program identified by the Clean Air Act to prevent air quality and visibility degradation and to remedy existing visibility problems. Areas of the country are grouped into three classes which are allowed certain degrees of pollution depending on their uses. National Parks and Wilderness areas meeting certain criteria are "Class I" or "clean areas" in that they have the smallest allowable increment of degradation.

**PROJECT AREA:** The geographic area of activities proposed in the alternatives.

**PROJECT FILE:** An assemblage of documents that contains all the information developed or used during an environmental analysis. The Project File becomes part of the administrative record for judicial review in case of legal action.

**PROPOSED ACTION:** In terms of the National Environmental Policy Act, the project, activity, or action that a federal agency intends to implement or undertake and which is the subject of an environmental analysis.

**PUBLIC PARTICIPATION:** A Forest Service process designed to broaden the information base upon which agency decisions are made by: (1) informing the public about Forest Service activities, plans, and decisions; and (2) encouraging public understanding and participation in the planning processes which lead to final decision-making.

**PUBLIC ISSUE (PUBLIC CONCERN):** A subject or question of widespread public interest relating to management of the National Forest System.

**RATE OF SPREAD (ROS):** The relative activity of a fire in extending its horizontal dimensions over time. Expressed as a rate of increase of the total perimeter of the fire, as a rate of forward spread of the fire front, or as a rate of increase in area, depending upon the intended use of the information. Usually it represents the forward spread and is expressed in chains per hour or meters per hour for a specific period in the fire's history.

**REACH:** A segment of a stream that contains similar physical characteristics (e.g., gradient, width, stream bottom materials). In general, most reaches are between 1 mile and 3 miles in length.

**RECORD OF DECISION:** A concise public document disclosing the decision made following preparation of an EIS and the rationale used by the Deciding Officer to reach that decision.

**RECREATION OPPORTUNITY SPECTRUM (ROS):** A range of possible combinations of recreation activities, settings, and experience opportunities, from Primitive to Urban, arranged along a continuum. Classes of recreation on the spectrum are:

**Primitive (PRIM)** - Area is characterized by essentially unmodified natural environment of

fairly large size. Interaction between users is very low and evidence of other area users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls.

Motorized use within the area is not permitted.

**Non-Motorized (SPNM)** - Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but is subtle. Motorized use is not permitted.

**Semi-Primitive motorized (SPM)** - Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but is subtle. Motorized use is permitted.

**Roaded Natural Appearing (RNA)** - Area is characterized by predominantly natural-appearing environment with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in the construction standards and design facilities.

**Rural (R)** - Area is characterized by substantially modified natural environment. Resource modification and utilization practices are primarily to enhance specific recreation activities and to retain vegetative cover and soil. Sights and sounds of man are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.

**Urban (U)** - Area is characterized by substantially urbanized environment though the background may have a natural appearance. Resource modification and utilization practices enhance specific recreation activities. Vegetation cover is often exotic and manicured. Sights and sounds of humans are predominant. Large numbers of users can be expected both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

**REFERENCE DOSAGE:** A very conservative toxicological threshold of chronic herbicide exposure that assumes daily exposure over a 70-year lifespan.

**REGENERATION:** The renewal of a tree crop, whether by planting or natural means. This term may also refer to the crop (i.e., seedlings, saplings) itself.

**REGENERATION HARVEST:** Used in reference to even aged treatment such as clearcut, seedtree, and shelterwood harvest methods which remove an existing stand to prepare a site for regeneration.

**REHABILITATION (Soil):** - Treatments that restore vital soil functions to their inherent range of variability. It is recognized that treatments may need to occur over a period of years and may need to be maintained. Restoration treatments could include but are not limited to, tillage, ripping, seeding, mulching, recontouring, and water barring.

**RELEASE THINNING:** Freeing a tree from immediate competition by cutting or otherwise eliminating growth that is overtopping or closely surrounding the tree. May be done for incidental disease control work, release of natural and planted regeneration, and accompanying work to eliminate related fuel accumulations.

**RESERVE TREE:** Trees retained after the regeneration period (pole-sized or larger) under the clearcutting, seed tree, or shelterwood methods.

**RESIDUAL TREE:** Trees remaining after an activity or disturbance event.

**RESPONSIBLE OFFICIAL:** The Forest Service line officer who has the authority and responsibility to oversee the planning process and make decisions on proposed actions. May also be referred to the Deciding Official.

**RESTORATION (Forest):** Holistic approach taken to modify an ecosystem to achieve desired, healthy, and functioning conditions and processes. Deliberate alteration of ecological patterns and processes to recreate presumed sets of natural, pre-disturbance ecosystem conditions. Restored forests are therefore similar in structure, function and composition to historic forests. Generally refers to the process of enabling the system to resume its resiliency to disturbance.

**RESTORE:** Management emphasis designed to move ecosystems to desired conditions and processes, and/or to healthy forestlands, rangelands, and aquatic systems; a variety of management-induced activities dominate the landscape. Generally, "restore" strategies are applied to areas of moderate to low ecological integrity.

**RILL/GULLY:** A channel or miniature valley cut by concentrated runoff, through which water commonly flows only during and immediately after heavy rains or during the melting of snow.

**RIPARIAN AREAS/HABITATS:** Land where the vegetation and microclimate are influenced by perennial and/or intermittent water.

**RIPARIAN HABITAT CONSERVATION AREA (RHCA):** As established by the Inland Native Fish Strategy, RHCAs are portions of watersheds where riparian-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. Examples of RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems.

**RIPARIAN MANAGEMENT OBJECTIVE (RMO):** Objectives specified by the Inland Native Fish Strategy regarding how Riparian Habitat Conservation Areas are to be managed. These objectives apply to factors such as pool frequency, large woody debris, mean-maximum temperature, and mean wetted width- depth ratios.

**ROAD:** A motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary.

**Classified Road:** Roads wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service.

**Arterial Road:** A Forest road that provides service to a large land area and usually connects with other arterial roads or public highways.

**Collector Road:** A Forest road that serves smaller land areas than an arterial road, and usually connects Forest arterial roads to local Forest roads or terminal facilities.

**Local Road:** A Forest road that connects terminal facilities with Forest collector, Forest arterial, or public highways. Usually Forest local roads are single purpose transportation facilities.

**Temporary Road:** Roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the forest transportation system and not necessary for long-term resource management.

**Unclassified Road:** Roads on National Forest System lands that are not managed as part of the

Forest transportation system, such as unplanned **roads**, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization.

**ROAD DENSITY:** Number of miles of open road per square mile.

**ROAD MAINTENANCE:** The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

**ROADED NATURAL RECREATION SETTING:** A classification on the recreation opportunity spectrum where timber harvest or other surface use practices are: - evident. Motorized vehicles are permitted on all or parts of the road system.

**ROSGEN STREAM TYPE CLASSIFICATION:** A system of measure that utilizes various channel features to rate a stream or river into reproducible classes.

**ROTATION:** The planned number of years required to establish (including a regeneration period) and grow timber crops to a specified condition

**RUTTING:** Deformation of the soil under saturated conditions resulting in detrimental changes to soil structure and reduced porosity.

**SALMONIDS:** Members of the family of elongate soft-finned fishes Salmonidae - the trout and salmon family.

**SALVAGE:** Removal of trees that are dead, dying, deteriorating, or in danger of being killed by injurious agents. A manageable stand still remains after a salvage treatment.

**SANITATION:** The removal of dead, damaged, or insect and disease susceptible trees to prevent the spread of pests or pathogens.

**SAWLOG:** A log that meets minimum regional standards of diameter, length, and defect, intended for sawing.

**SAWTIMBER:** Trees containing at least one 8-foot piece with a 5.6 inch diameter inside bark at the small end and meeting Regional specification for defect percentage. Trees must be at least 6.9 inches in diameter at breast height for all species except lodgepole pine which will be 6 inches at breast height.

**SCOPING:** The procedures by which the Forest Service collects input in the environmental analysis process. This information is used to determine: the extent of analysis necessary; the range of actions, alternatives, and impacts to be addressed; the significant issues related to the proposed action; and the depth of environmental analysis, data, and task assignments needed.

**SEDIMENT:** Any material carried in suspension by water, which will ultimately settle to the bottom. Sediment has two main sources: from the stream channel area itself and from disturbed sites.

**SEDIMENT (DEPOSITION)** – See Aggregation (Deposition)

**SEDIMENT TRAP:** Any natural or man-made feature in a stream that traps sediment.

**SEED TREE METHOD:** Removal of the mature timber in one cutting, except for a small number of seed trees left singly or in small groups.

**SEEDLING AND SAPLINGS:** A size category for forested stands in which trees are less than 5 inches in diameter.

**SENSITIVE SPECIES:** Those species identified by the Regional Forester for which population viability is a concern as evidenced by significant current or predicted downward trends in (a) population numbers or density, or (b) habitat capability that would reduce a species' existing distribution.



**SENSITIVITY LEVEL:** A particular degree or measure of viewer interest in the scenic qualities of the landscape.

**SUCCESSIONAL STAGE (Seral Stage):** The series of plant community conditions that develop during ecological succession from bare ground (or major disturbance) to the climax stage. *Early seral stage* is a condition in which plants are present soon after a disturbance or at the beginning of a new successional process (seedling or saplings in a forest). Grass, herbs, or brush are abundant, diversity is high. A *mid-seral stage* is characterized in a forest setting has almost full crown closure in pole-to medium-sized trees. Understory vegetation and species diversity is less due to tree shading. A *late seral stage* is a condition with mature trees, often of old forest character. Tree growth has slowed, mortality has increased, understory forage is minimal, structural diversity may be high, and species diversity is generally less.

**SUITABLE HABITAT:** Currently has the habitat components and structure to meet the needs of wildlife species.

**SHELTERWOOD METHOD:** Removal of the mature timber in a series of cuttings, which extend over a relatively short portion of the rotation, by means of which the establishment of essentially even-aged reproduction under the partial shelter of seed trees is encouraged.

**SIGNIFICANT:** As used in NEPA, requires consideration of both context and intensity. Context means that the significance of an action must be analyzed in several contexts such as society as a whole, and the affected region, interests, and locality. Intensity refers to the severity of impacts (40 CFR 1508.27).

**SILVICULTURE:** The art and science of manipulating forest vegetation to meet a desired future condition based on land management objectives.

**SILVICULTURE DIAGNOSIS:** The processes of comparing existing stand conditions to a desired condition or "target stand," and determining a need for treatment to bring the stand to the desired condition, based on land management objectives.

**SILVICULTURE PRESCRIPTION:** A detailed written document that describes management activities needed to implement silvicultural treatment or treatment sequence. The prescription documents the results of an analysis of present and anticipated site conditions and management direction. It also describes the desired future vegetation conditions in measurable terms. The desired condition is a basis for treatment, monitoring, and evaluation.

**SILVICULTURAL SYSTEM:** A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. The system name is based on the number of age classes (e.g., even-aged, two aged, uneven-aged) or the regeneration method (e.g., clearcutting, seed tree, shelterwood, selection) used.

**SLASH:** Debris left on the ground after treatment activities and/or as a result of storm or fire damage. The term slash usually refers to small diameter seedlings, saplings, poles, logs, branches, stumps, and/or broken understory trees or brush.

**SLASH DISPOSAL:** Treatment of slash to reduce the fire hazard or for other purposes.

**SLASHING:** Slashing consists of felling and/or limbing small diameter vegetation to improve residual tree growth, vigor and healthy or to prepare an area for underburning where ladder fuels may be a problem.

Slashing may be done in conjunction with other treatments including thinnings, piling, and burning.

**SMOKE MANAGEMENT PLAN:** A forecast issued daily during specific periods advising fire managers of atmospheric conditions with special emphasis on elements which will affect the dispersal of pollutants from a fire.

**SNAG:** A dead, standing tree.

**SNAG-DEPENDENT WILDLIFE:** Wildlife species that are dependent on standing dead trees for nesting or roosting habitat or for food.

**SOIL FUNCTION:** Primary soil functions are: (1) the sustenance of biological activity, diversity, and productivity, (2) soil hydrologic function, (3) filtering, buffering, immobilizing, and detoxifying organic materials, and (4) storing and cycling nutrients and other materials.

**SOIL PRODUCTIVITY:** The capacity of a soil to produce a specific crop such as fiber and forage, under defined levels of management. It is generally dependent on available soil moisture and nutrients and length of growing season.

**SOIL QUALITY:** The capacity of a specific soil function within its surroundings, support plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation.

**SPECIES:** A unit of classification of plants and animals consisting of the largest and most inclusive array of sexually reproducing and cross-fertilizing individuals which share a common gene pool.

**SPECIES VIABILITY:** A species consisting of self-sustaining and interacting populations that are well distributed through the species' range. Self-sustaining populations are those that are sufficiently abundant and have sufficient genetic diversity to display the array of life history strategies and forms to provide high likelihood for their long-term persistence and adaptability over time.

**STAND:** A community of trees or other vegetation uniform in composition, constitution, spatial arrangement, or condition to be distinguishable from adjacent communities.

**STAND COMPOSITION:** The unique representation of tree species and structural characteristics of any forest stand.

**STAND DENSITY:** Refers to the number of trees growing in a given area. Can be expressed in terms of trees per acre, basal area per acre, stand density index and/or other measures.

**STAND-REPLACING FIRE:** A fire that kills most or all of a stand of trees.

**STAND STRUCTURE:** The horizontal and vertical arrangement of the vegetation in a stand. The components of stand structure might include tree diameter, heights, crown layers, number of stems, shrubs, herbaceous understory, snags, and down logs.

**STANDARD:** A particular action, level of performance, or threshold specified by the Forest Plan for resource protection or accomplishment of management objectives. Unlike "guidelines" which are optional, standards specified in the Forest Plan are mandatory.

**STATE IMPLEMENTATION PLANS:** A plan required by the Clean Air Act and prepared by an Air Quality Regulatory Agency, which describes how the state will attain and maintain air quality so as to not violate National Air Ambient Air Quality Standards.

**STOCKING:** A measure of tree density as it relates to an optimum or desired density to achieve a given management objective.

**STREAM:** A natural watercourse of perceptible extent that has a generally sandy or rocky bottom or definite banks and that confines and conducts continuously or intermittently flowing water. "Perceptible extent" means that 50% of a 100-foot segment meets the definition of a stream (Montana Streamside Management Law).

**STREAM CHANNEL STABILITY:** A classification system that utilizes ocular estimates of various channel, bank, and riparian area features to evaluate channel health.

**STRUCTURAL DIVERSITY:** The variation in sizes and shapes of landscape elements, as well as diversity of pattern (i.e., heterogeneity).

**SUBPOPULATION:** A geographically distinct segment of a larger population. For example, the bull trout in Mill Creek area subpopulation of the larger bull trout population in the entire Bitterroot River Drainage.

**SUCCESSION:** A predictable process of changes in structure and composition of plant and animal communities over time. Conditions of the prior plant community or successional stage create conditions that are favorable for the establishment of the next stage. The different stages in succession are often referred to as seral stages, refer to seral stage definition.

**SUCCESSIONAL STAGE:** A stage or recognizable condition in the gradual supplanting of one community of plants by another.

**SUMMER RANGE:** range, usually at higher elevation, used by deer and elk during the summer; a summer range is usually much more extensive than a winter range.

**SUPPRESSED:** Refers to individual trees which are growing very slowly. The trees have their crowns in the lower layers of the canopy and the leading shoots are not free.

**SUPPRESSION (FIRE SUPPRESSION):** Any act taken to extinguish, slow, or stop a fire beginning with its discovery. Examples of suppression activities include fireline construction, backfiring, and applying water or chemical fire retardants.

**SURFACE EROSION:** The detachment and transport of individual soil particles by wind, water, or gravity. Surface erosion is the loss of soil in a fairly uniform layer across the land surface (sheet erosion), in many small rills, or as larger gullies.

**SURFACE FIRE:** Fire that burns surface litter, other loose debris and small vegetation.

**SURFACE FUELS:** All materials lying on, or immediately above, the ground, including needles or leaves, duff, grass, small dead wood, downed logs, stumps, large limbs, low brush and reproduction.

**TARGET STAND:** A description of individual forest stands that reflects the desired future attributes and conditions that have the potential to meet management objectives.

**THERMAL COVER:** Vegetation used by animals to modify the adverse effects of weather. A forest stand that is at least 40 feet in height with tree canopy cover of at least 70 percent provides thermal cover. These stand conditions are achieved in closed sapling-pole stands and by all older stands unless the canopy cover is reduced below 70 percent. Deciduous stands may serve as thermal cover in summer, but not in winter.

**THINNING:** Intermediate cuttings that are aimed primarily at controlling growth of stands through adjustments in stand density. Thinning can be categorized as commercial or non-commercial.

**THIN-FROM-BELOW:** Removing trees from the lower crown classes to favor those in the upper crown classes.

**THREATENED SPECIES:** Any species of plant or animal which is likely to become endangered within the foreseeable future throughout all of a significant portion of its range.

**TIMBER BASE:** The lands within the Forest that are suitable for timber production.

**TIMBER PRODUCTION:** The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use.

**TIMBER STAND IMPROVEMENT:** A loose term comprising all intermediate cuttings made to improve the compositions and condition of the timber stand.

**TIMBER TYPES:** Refer to Forest Cover Type definition.

**TORCHING:** Fire burning principally as a surface fire that intermittently ignites the crowns of trees or shrubs as it advances.

**TRAIL:** A commonly used term denoting a pathway for purposes of travel by foot, stock, or trail vehicles.

**TURBIDITY:** An optical measure of how fine sediment inhibits light transmission in a given water sample due to scattering and absorption by suspended particles.

**UNDERBURN:** A fuel reduction/site preparation treatment in which surface fuels are ignited under controlled conditions and are allowed to burn with specified parameters. Underburns are usually conducted in areas where the fuel bed is fairly continuous and conditions are such that fire will spread in a predictable and consistent fashion. Underburning implies that there is a live overstory present and often a live understory as well. Prescriptions for underburning usually include an acceptable mortality level in the live component.

**UNDERSTORY:** Vegetation (e.g., trees or shrubs) growing under the canopy formed by taller trees.

**Undetermined road:**

**UNEVEN-AGED MANAGEMENT:** The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes.

Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

**UNIT:** A treatment area that may undergo activity such as harvest, salvage, burning, or other purposes that is specified within boundaries.

**UNMERCHANTABLE:** Timber that does not meet minimum height and diameter specifications which would make it suitable for commercial sawtimber.

**UNROADED AREAS:** Any area without the presence of a classified road (i.e., a road at least 50 inches wide and constructed or maintained for vehicle use) of a size and configuration sufficient to protect the inherent characteristics associated with its roadless condition. Unroaded areas do not overlap with inventoried roadless areas.

**VALUES AT RISK:** Natural resources, improvements, or other values that may be jeopardized if a fire occurs.

**VEGETATION RESPONSE UNITS (VRU):** Refer to Habitat Type Group definition.

**VERTICAL DIVERSITY:** The diversity in an area that results from the complexity of the above ground structure of the vegetation; the more tiers of vegetation or the more diverse the species makeup is, the higher the degree of vertical diversity.

**VIALE POPULATION:** A wildlife population of sufficient size to maintain its existence over time in spite of normal fluctuations in population levels.

**VISUAL QUALITY OBJECTIVE (VQO):** A system of indicating the potential expectations of the visual resource by considering the frequency an area is viewed and the type of landscape. VQOs are listed below:

**Maximum Modification:** Human activities may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

**Modification:** Human activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as natural occurrence when viewed in foreground or middleground.

**Partial Retention:** Human activity may be evident but must remain subordinate to the

characteristic landscape.

**Retention:** Human's activities are not evident to the casual Forest visitor.

**Preservation:** Provides for ecological change only.

**Variety Class:** Diversity of the landscape character.

**Sensitivity Level:** A particular degree or measure of viewer interest in the scenic qualities of the landscape.

**VISUAL RESOURCE:** The composite of landforms, water features, vegetative patterns, and cultural features which create the visual environment.

**WATER YIELD:** The measured output of the Forest's streams.

**WEEDING THINNING:** The elimination or suppressing undesirable vegetation, mainly herbaceous, during the seedling stage of a forest crop so as to reduce competition with the seedling stand. May also include incidental disease control work, release of natural and planted regeneration, and accompanying work to eliminate related fuel accumulations.

**WETLANDS:** Those areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include marshes, bogs, sloughs, potholes, river overflows, mud flats, wet meadows, seeps, and springs.

**WHOLE TREE YARDING:** During timber harvesting, entire trees are yarded to the landing. Tops, limbs, and other unmerchantable material is piled for later treatment and/or utilization at the landing site.

**WILDERNESS:** All lands included in the National Wilderness Preservation System by public law; generally defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation.

**WILDLAND-URBAN INTERFACE (WUI):** Includes those areas of resident human populations at imminent risk from wildland fire, and human developments having special significance. These areas include developments and structures that if destroyed by fire, would result in hardships to individuals and communities. These areas encompass not only the sites themselves but also the continuous slopes and fuels that lead directly to the sites, regardless of the distance involved.

**WINTER RANGE:** A range, usually at lower elevation, used by migratory deer and elk during the winter months. It is usually better defined and smaller than summer range.

**WOODY DEBRIS RECRUITMENT:** The process of trees naturally falling over and landing in stream channels.

**YEAR-ROUND CLOSURE:** Gate, earthen barrier, or sign closing a road or area all year long. These areas are sometimes open during harvest or other land management activities.

**YARDING:** A method of bringing material to a roadside or landing, for transport. Methods include forms of skyline cabling, ground-based skidding, balloon, and helicopter.

## ABBREVIATIONS AND ACRONYMS

AIRFA	American Indian Religious Freedom Act	GIS	Geographical Information System
ALT	Alternative	HD	Hunting District
APE	Area of Potential Effect	HFRA	Healthy Forests Restoration Act
ARM	Administrative Rule of Montana	HG	Habitat Group
ARPA	Archaeological Resource Protection Act	HSI	Habitat Suitability Index
ATV	All-terrain Vehicle (also OHV or ORV)	HUC	Hydrologic Unit Code
BA	Basal Area; refers to forest management	ICBEMP	Interior Columbia Basin Ecosystem Mgmt Project
BA	Biological Assessment; refers to ESA	ID Team	Interdisciplinary Team
BACT	Best Available Control Technology	IMPLAN	Employment and Income Impacts Model
BAER	Burned Area Emergency Response	INFISH	Inland Native Fish Strategy
BMPs	Best Management Practices	KOC	Soil Absorption Coefficient
CAA	Clean Air Act	LAU	Lynx Analysis Unit
CCF	100 Cubic Feet	LCAS	Lynx Conservation Assessment Strategy
CDC	Centers for Disease Control	LWD	Large Woody Debris
CEQ	Council on Environmental Quality	MA	Management Area
CFR	Code of Federal Regulation	MBF	Thousand Board Feet
CFS	Cubic Feet Per Second	MDEQ/DEQ	MT Department of Environmental Quality
CMAI	Culmination of Mean Annual Increment	MIS	Management Indicator Species
CWA	Clean Water Act	MMBF	Million Board Feet
CWD	Coarse Woody Debris	MNHP	Montana Natural Heritage Program
DBH	Diameter at Breast Height (4.5ft)	MT FWP	Montana Fish, Wildlife & Parks
DEIS	Draft Environmental Impact Statement	MT SHPO	Montana State Historic Preservation Office
DPS	Distinct Population Segment	MVUM	Motor Vehicle Use Map
DSD	Detrimental Soil Disturbance	NAAQS	National Ambient Air Quality Standards
EA	Environmental Assessment	NAGPRA	Native American Graves Protection and Repatriation Act
EHE	Elk Habitat Effectiveness	NEPA	National Environmental Policy Act
EIS	Environmental Impact Statement	NFDRS	National Fire Danger Rating System
EPA	Environmental Protection Agency	NFMA	National Forest Management Act
ESA	Endangered Species Act	NFS	National Forest System
FACTS	Forest Activity Tracking System	NFSR	National Forest System Road
FEIS	Final Environmental Impact Statement	NHPA	National Historic Preservation Act
FMU	Fire Management Units	NRCS	Bitterroot National Forest Soil Survey
FP	Forest Plan	NRHP	National Register of Historic Places
FSH	Forest Service Handbook	NRM	Northern Rocky Mountains
FSM	Forest Service Manual	OHV	Off-highway Vehicle
FWS/USFWS	United States Fish & Wildlife Service		

ORV	Off-road Vehicle	SIS	Smoke Impact Sheet
OSHA	Occupational Safety & Health Administration	SMZ	Streamside Management Zone
PF	Project File	SWCPs	Soil and Water Conservation Practices
PIBO	PACFISH/INFISH Biological Opinion	TEA	Transaction Evidence Appraisal
PM2.5	Fine Particulate Matter	TES	Threatened and Endangered Species
PM10	Coarse Particulate Matter	TLM	Track Line Machine
PNV	Present Net Value	TMDL	Total Maximum Daily Loads
PSD	Prevention of Significant Deterioration	TSA	Timber Sale Administrator
R1 SQS	Region 1 Soil Quality Standards	TSMRS	Timber Stand Management Record System
RARE II	Roadless Area Review and Evaluation	µg/m3	Microgram per cubic meter
RfD	Reference Dosage	USDA	United States Department of Agriculture
RHCA	Riparian Habitat Conservation Area	USDI	United States Department of Interior
RMO	Riparian Management Objective	USFS	United States Forest Service
ROS	Recreation Opportunity Spectrum	USFWS	USDI-Fish & Wildlife Service
SHPO	State Historic Preservation Officer	VQO	Visual Quality Objectives
SIO	Scenic Integrity Objectives	VRU	Vegetation Response Unit
SIP	State Implementation Plans	WEPP	Water Erosion Prediction Project
		WQLS	Water Quality Impaired Streams